

## REMARKS

This Amendment is in response to the non-final Office Action mailed January 15, 2004. Claims 1 to 88 were pending previously in this case. Claims 1 to 14, 47 to 86, and 88 have been withdrawn from consideration due to a restriction/election requirement. Claim 16 is being cancelled herein without prejudice or disclaimer. Claims 15, 17 to 19, 34, and 87 have been amended herein. Dependent claims 89 to 100 have been added. Enclosed is a check in the amount of \$308.00 to cover the cost of the One Month Extension of Time and the additional eleven dependent claims. In the event there is an error in the amount owed, please charge Deposit Account No. 02-1818 for any additional costs.

In the Office Action, Claims 30 to 33 and 35 to 46 were allowed. Claim 16 was objected to as being dependent on a rejected claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 17 to 19, 25 to 29, and 34 were rejected under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 15, 17, 18, 20 to 24, and 87 were rejected under 35 U.S.C. §103(a) as being obvious in view of U.S. Patent No. 5,279,685 to Ivansons et al ("*Ivansons*") in view of JP 53-14772 ("*the Japanese reference*"), U.S. Patent No. 6,596,122 to Savitski et al ("*Savitski*"), and U.S. Patent No. 6,201,211 to Emmelmann ("*Emmelmann*"). Claims 25 to 28 were rejected under 35 U.S.C. §103(a) as being obvious in view of *Ivansons*, *the Japanese reference*, and *Savitski*. Claim 29 was rejected under 35 U.S.C. §103(a) as being obvious in view of *Ivansons*, *the Japanese reference*, *Savitski*, and *Emmelmann*.

Regarding the issues identified in the Office Action with respect to the information disclosure statements, to the best of Applicant's ability the information sought is being collected and will be provided as soon as collection is completed.

Regarding the §112 rejections, Claim 15 has been amended to include "a prism." In addition, reference to "a prism" has been removed from Claims 17, 18 and 19. As such, proper antecedent basis now exists in Claims 17 to 19. Claim 34 has been amended to refer to Claim 31 rather than Claim 30. Proper antecedent basis now exists for "the sensor" of Claim 34 as established in Claim 31.

Regarding the §112 rejection of Claim 25, Applicants respectfully submit that Claim 25 is not indefinite. Read in context, the word "connect", means weld, which is supported by the

specification at page 22, lines 15 to 26. Claim 25 specifies that the laser unit is capable “to sterilize each end and connect the two tube ends together,” or in other words, to be capable of sterilizing each tube end and to weld the two tube ends together. Claim 25 read in this context is not indefinite and is in proper condition for allowance. Accordingly, Applicants respectfully submit that all §112 rejections have been properly addressed.

Regarding the § 103(a) rejection of Claims 15, 17, 18, 20 to 24, and 87 in view of *Ivansons*, *the Japanese reference*, *Savitski*, and *Emmelmann*, independent Claims 15 and 87 of the present invention have been amended to highlight certain distinctions between the present invention and the art of record, taken alone or in combination. For example, the Office Action states at page 9 that “the prior art of record fails to suggest the claimed device for providing a connection between two flexible tube ends, particularly having a prism movably mounted between the two tube ends.” Claim 15 presently includes the limitations of objected to claim 16, namely:

a laser optics assembly capable of changing a direction of the laser beam so that the laser beam strikes the tube ends, wherein the laser optics assembly includes a prism movably mounted between the two tube ends.

Applicant therefore respectfully submits that Claim 15 is now patentably distinct with respect to the prior art of record, alone or in combination, as none of the art of record teaches, suggests or discloses such structure. Accordingly, Claim 15, and Claims 17 to 24 that depend from Claim 15, are in condition for allowance.

Regarding the §103(a) rejection of Claim 87, Claim 87 presently includes:

a prism not being positioned between the pair of tube holders, the prism positioned and arranged with respect to the tube ends to direct the laser beam so that the laser beam strikes the tube ends.

There appears to be no teaching or suggestion by any of the art of record to provide a prism that is positioned and arranged to direct a laser beam to tube ends. Although *Emmelmann* and *the Japanese reference* teach using a prism in the device, the prism is not positioned and arranged in a manner so as to direct the laser beam to the tube ends, as seen and supported by the specification at p. 26, lines 20 to 28 and Fig. 7. Applicant therefore respectfully submits that Claim 87 is novel, non-obvious and patentably distinct over *Ivansons*, *the Japanese reference*,

*Savitski* and *Emmelmann*. Accordingly, Claim 87, and Claims 97 to 100 that depend from Claim 87, are in condition for allowance.

Various claims depending from Claim 87 provide additional patentable features over *Ivansons*, *the Japanese reference*, *Savitski* and *Emmelmann*. For example, none of those references teaches using a prism constructed from two rough edged lenses, or including an additional lens located between the prism surface and the tube ends, wherein the additional lens further focuses the laser beam on the tube ends as included in Claims 98 and 100. The prism of *Emmelmann* and *the Japanese reference* do not teach or suggest those additional features.

Regarding the § 103(a) rejection of Claims 25 to 28 in view of *Ivansons*, *the Japanese reference*, and *Savitski*, Applicants respectively traverse the assertion that Claim 25 is unpatentable over those references, alone or in combination. Claim 25 includes:

a sensor near the tube holders to analyze the connection between  
the two tube ends.

There appears to be no teaching or suggestion by any of the above cited references to provide a sensor that analyzes the connection and integrity of the weld. Although *Ivansons* teaches using sensors in the device, the sensors analyze the operation of the machine and its internal operating functions and do not inspect the quality of the actual product outputted by the device (i.e. the weld). For example, *Ivansons* at column 6, lines 29 to 36 teaches using a clamp sensor to ensure the presence of a squashed tube, and to assure that the device's clamp is in its closed position. *Ivansons* also teaches the use of sensors to assure that the welder is operating in its intended manner, and to determine different conditions of the welding machine. However, none of the references teach a sensor to "analyze the connection between the two tube ends" as included in Claim 25. Accordingly, Claim 25, and Claims 26 to 29 and 89 to 94 that depend from Claim 25, are in condition for allowance.

Claim 91 depends from Claim 25 and provides a further independently patentable feature, namely, that the "data corresponding to the weld to profile data to determine if an acceptable weld has been formed," which is supported by the specification at page 23, lines 10 to 27. Again, *Ivanson's* sensors do not constitute teaching a sensor to directly analyze the output of the device (i.e. the weld). Instead, the sensors are for monitoring the functionality of components within the device. Applicant therefore respectfully submits that Claim 91 provides additional patentable features over the art of record, alone or in combination.

Appl. No. 10/061,835  
Reply to Office Action of January 15, 2004

For the foregoing reasons, Applicant respectfully requests reconsideration of the patent application and earnestly solicits an early allowance of same.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY 

Robert W. Connors

Reg. No. 46,639

P.O. Box 1135

Chicago, Illinois 60690-1135

Phone: (312) 807-4214

Dated: May 17, 2004